Route 680/880 Cross Connector Study

Summary Cost Estimate

Short-Term Projects

Project	Description	Construction Cost	Right of Way Cost	Design Engineering Management	Estimated Total Project Cost
A1A	Auto Mall Parkway Widening to Six Lanes	$13,900,000	$1,200,000	$6,500,000	$21,600,000
B1B	Fremont/Grimmer Widen At Grade to Six Lanes	$22,000,000	$21,000,000	$10,400,000	$53,400,000
D3A	Kato Road with New I-880 Overcrossing to Fremont Blvd.	$14,100,000	$18,000,000	$6,700,000	$38,800,000
E1A	Calaveras/237 Widening to Six Lanes	$19,100,000	$6,900,000	$9,000,000	$35,000,000
					$148,800,000

Long-Term Projects

Project	Description	Construction Cost	Right of Way Cost	Design Engineering Management	Estimated Total Project Cost
B2C	Fremont/Grimmer 2-Lane Elevated HOV Freeway	$90,300,000	$88,200,000	$42,700,000	$221,200,000
C1A	Mission Blvd Tunnel - Mixed Flow (4 Lanes)	$315,200,000	$2,300,000	$149,000,000	$466,500,000
C1D	Mission Blvd Tunnel - HOV (4 Lanes)	$595,000,000	$2,400,000	$281,000,000	$878,400,000
C2B	Mission Blvd/Warm Springs Grade Separation (See Note 2)	$33,400,000	$12,800,000	$15,800,000	$62,000,000
E3A	Calaveras/237 2-Lane Elevated HOV Along Serra/Los Coches	$93,100,000	$42,000,000	$44,000,000	$179,100,000
E3C	Calaveras/237 2-Lane Elevated HOV Along Calaveras Blvd	$78,900,000	$18,400,000	$37,300,000	$134,600,000
F3D	Montague 680 Direct Elevated HOV	$46,200,000	$22,300,000	$21,800,000	$90,300,000

NOTES

1. The above figures are intended to be used for cost comparison between the different alternatives only. All costs are estimated using the same methodology, though they are not meant to represent a precise total cost.

2. Includes cost of Warren Avenue grade separation as obtained from City of Fremont. The construction cost is $20 Million and relocation of existing businesses cost is $20 Million (included as R/W cost).

NOLTE
BEYOND ENGINEERING

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: A1A I680-I880 - Automall Widen 6 lanes (Grimmer Corridor)
Date: February 2004

Item	Description	Cost	%
1	Earthwork	$ 873,500	
2	Pavement	$ 3,092,250	
3	Landscaping	$ -	
4	Structures:		
	a. Railway Over pass	$ 759,500	
	b. 680 Overpass	$ 676,200	
	c. Sidewalk	$ 1,311,300	
	d.		
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 100,000	
	b. ITS	$ 400,000	
	c. Traffic Signals	$ 300,000	
	d. Barriers & Guardrails	$ 244,800	
7	**Subtotal 1:**	**$ 7,757,550**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 823,852	
9	Drainage (0% to 20% of Subtotal 1)*	$ 155,151	2%
10	Signing (0% to 5% of Subtotal 1)*	$ 54,303	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ -	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 108,606	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 426,665	6%
14	**Subtotal 2:**	**$ 1,568,577**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 9,326,127**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 932,613	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 10,258,739**	
18	Construction Contingency (35% of Subtotal 4)	$ 3,590,559	
19	**Construction Subtotal:**	**$ 13,849,298**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 1,384,930	
21	Design Engineering & Management (15% of [1])	$ 2,077,395	
22	Construction Engineering & Management (10% of [1])	$ 1,384,930	
23	**Subtotal 5:**	**$ 4,847,254**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 1,696,539	
25	**Planning/Engineering Subtotal:**	**$ 6,543,793**	
26	Land, Easements and Right of Way Subtotal	$ 911,510	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 319,029	
28	**Planning/Engineering/ROW Subtotal:**	**$ 7,774,332**	**[2]**
29	**Total ([1] + [2]):**	**$ 21,623,630**	
30	**or Estimated as:**	**$ 21,600,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: A1A I680-I880 - Automall Widen 6 lanes (Grimmer Corridor)
Date: February 2004

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	823,852	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	232,727	3%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	465,453	6%
8d	Demolition (0% to 5% of Subtotal 1)*	$	125,672	2%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: B1B I680-I880 - Freemont (Grimmer Corridor)
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 1,240,000	
2	Pavement	$ 6,825,000	
3	Landscaping	$ -	
4	Structures:		
	a. SB i680 Bridge	$ 286,062	
	b. NB I680 Bridge	$ 415,540	
	c. Retaining Walls	$ 2,475,000	
	d.		
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 100,000	
	b. ITS	$ 400,000	
	c. Traffic Signals	$ 600,000	
	d.		
7	**Subtotal 1:**	**$ 12,341,602**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 1,209,477	
9	Drainage (0% to 20% of Subtotal 1)*	$ 222,149	2%
10	Signing (0% to 5% of Subtotal 1)*	$ 617,080	5%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ -	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 123,416	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 246,832	2%
14	**Subtotal 2:**	**$ 2,418,954**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 14,760,556**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 1,476,056	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 16,236,612**	
18	Construction Contingency (35% of Subtotal 4)	$ 5,682,814	
19	**Construction Subtotal:**	**$ 21,919,426**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 2,191,943	
21	Design Engineering & Management (15% of [1])	$ 3,287,914	
22	Construction Engineering & Management (10% of [1])	$ 2,191,943	
23	**Subtotal 5:**	**$ 7,671,799**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 2,685,130	
25	**Planning/Engineering Subtotal:**	**$ 10,356,929**	
26	Land, Easements and Right of Way Subtotal	$ 15,500,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 5,425,000	
28	**Planning/Engineering/ROW Subtotal:**	**$ 31,281,929**	**[2]**
29	**Total ([1] + [2]):**	**$ 53,201,354**	
30	**or Estimated as:**	**$ 53,200,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: B1B I680-I880 - Freemont (Grimmer Corridor)
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	1,209,477	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	123,416	1%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	617,080	5%
8d	Demolition (0% to 5% of Subtotal 1)*	$	160,441	1%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	308,540	3%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: B2C I680-I880 - Freemont (Grimmer Corridor)
Date: February 2004

Item	Description	Cost	%
1	Earthwork	$ 1,715,000	
2	Pavement	$ 6,536,400	
3	Landscaping	$ -	
4	Structures:		
	a. 2-Lane HOV Bridge	$ 44,736,300	
	b. Retaining Walls	$ 2,850,000	
	c.		
	d.		
	e.		
	f.		
5	Soundwalls	$ 1,440,000	
6	Miscellaneous:		
	a. Traffic Control Systems	$ 150,000	
	b. Transportation Management Plan	$ 150,000	
	c. Barriers and Guardrails	$ 360,000	
7	**Subtotal 1:**	**$ 57,937,700**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 2,114,726	
9	Drainage (0% to 20% of Subtotal 1)*	$ 231,751	0%
10	Signing (0% to 5% of Subtotal 1)*	$ 144,844	0%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ -	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 144,844	0%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 202,782	0%
14	**Subtotal 2:**	**$ 2,838,947**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 60,776,647**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 6,077,665	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 66,854,312**	
18	Construction Contingency (35% of Subtotal 4)	$ 23,399,009	
19	**Construction Subtotal:**	**$ 90,253,321**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 9,025,332	
21	Design Engineering & Management (15% of [1])	$ 13,537,998	
22	Construction Engineering & Management (10% of [1])	$ 9,025,332	
23	**Subtotal 5:**	**$ 31,588,662**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 11,056,032	
25	**Planning/Engineering Subtotal:**	**$ 42,644,694**	
26	Land, Easements and Right of Way Subtotal	$ 65,250,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 22,837,500	
28	**Planning/Engineering/ROW Subtotal:**	**$ 130,732,194**	**[2]**
29	**Total ([1] + [2]):**	**$ 220,985,516**	
30	**or Estimated as:**	**$ 221,000,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: B2C I680-I880 - Freemont (Grimmer Corridor)
Date: February 2004

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	2,114,726	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	144,844	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	695,252	1%
8d	Demolition (0% to 5% of Subtotal 1)*	$	695,252	1%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	579,377	1%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: C1A Mission Boulevard between I-880 & I-680
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 5,343,600	
2	Pavement	$ 7,383,150	
3	Landscaping	$ -	
4	Structures:		
	a. CIP Concrete Tunnel	$ 180,600,000	
	b. Sidewalk	$ 1,448,200	
	c. Curb & Gutter	$ 227,520	
	d. Retaining walls	$ 5,207,250	
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 500,000	
	b. ITS	$ 500,000	
	c. Traffic Signals	$ 400,000	
	d.		
7	**Subtotal 1:**	**$ 201,609,720**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 1,965,695	
9	Drainage (0% to 20% of Subtotal 1)*	$ 5,241,853	3%
10	Signing (0% to 5% of Subtotal 1)*	$ 2,028,194	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 201,610	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 1,008,049	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 201,610	0%
14	**Subtotal 2:**	**$ 10,647,009**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 212,256,729**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 21,225,673	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 233,482,402**	
18	Construction Contingency (35% of Subtotal 4)	$ 81,718,841	
19	**Construction Subtotal:**	**$ 315,201,243**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 31,520,124	
21	Design Engineering & Management (15% of [1])	$ 47,280,186	
22	Construction Engineering & Management (10% of [1])	$ 31,520,124	
23	**Subtotal 5:**	**$ 110,320,435**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 38,612,152	
25	**Planning/Engineering Subtotal:**	**$ 148,932,587**	
26	Land, Easements and Right of Way Subtotal	$ 1,700,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 595,000	
28	**Planning/Engineering/ROW Subtotal:**	**$ 151,227,587**	**[2]**
29	**Total ([1] + [2]):**	**$ 466,428,830**	
30	**or Estimated as:**	**$ 466,400,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: C1A Mission Boulevard between I-880 & I-680
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	1,965,695	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	50,402	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	705,634	0%
8d	Demolition (0% to 5% of Subtotal 1)*	$	1,209,658	1%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: C1D Mission Boulevard between I-880 & I-680
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 10,989,900	
2	Pavement	$ 6,123,600	
3	Landscaping	$ -	
4	Structures:		
	a. CIP Concrete Tunnel	$ 367,150,000	
	b. Sidewalk	$ 1,448,200	
	c. Curb & Gutter	$ 227,520	
	d. Retaining walls	$ 2,160,000	
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 150,000	
	b. ITS	$ 500,000	
	c. Traffic Signals	$ 200,000	
	d.		
7	**Subtotal 1:**	**$ 388,949,220**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 2,411,485	
9	Drainage (0% to 20% of Subtotal 1)*	$ 7,001,086	2%
10	Signing (0% to 5% of Subtotal 1)*	$ 700,109	0%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 97,237	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 1,089,058	0%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 194,475	0%
14	**Subtotal 2:**	**$ 11,493,449**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 400,442,669**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 40,044,267	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 440,486,936**	
18	Construction Contingency (35% of Subtotal 4)	$ 154,170,428	
19	**Construction Subtotal:**	**$ 594,657,364**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 59,465,736	
21	Design Engineering & Management (15% of [1])	$ 89,198,605	
22	Construction Engineering & Management (10% of [1])	$ 59,465,736	
23	**Subtotal 5:**	**$ 208,130,077**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 72,845,527	
25	**Planning/Engineering Subtotal:**	**$ 280,975,605**	
26	Land, Easements and Right of Way Subtotal	$ 1,750,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 612,500	
28	**Planning/Engineering/ROW Subtotal:**	**$ 283,338,105**	**[2]**
29	**Total ([1] + [2]):**	**$ 877,995,469**	
30	**or Estimated as:**	**$ 878,000,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: C1D Mission Boulevard between I-880 & I-680
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	2,411,485	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	1,244,638	0%
8d	Demolition (0% to 5% of Subtotal 1)*	$	1,166,848	0%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: D3A Kato road west of Milmont drive and Scott Road cost estimate.
Date: February 2004

Item	Description	Cost	%
1	Earthwork	$ 757,250	
2	Pavement	$ 2,365,500	
3	Landscaping	$ -	
4	Structures:		
	a. I880 Overpass	$ 1,501,500	
	b. Barriers and Guardrail	$ 181,800	
	c. Retaining Walls	$ 2,493,750	
	d. Sidewalk	$ 287,500	
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 100,000	
	b. ITS	$ 50,000	
	c. Traffic Signals	$ 400,000	
	d.		
7	**Subtotal 1:**	**$ 8,137,300**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 358,041	
9	Drainage (0% to 20% of Subtotal 1)*	$ 650,984	8%
10	Signing (0% to 5% of Subtotal 1)*	$ 110,789	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 56,961	1%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 105,785	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 105,785	1%
14	**Subtotal 2:**	**$ 1,388,345**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 9,525,645**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 952,565	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 10,478,210**	
18	Construction Contingency (35% of Subtotal 4)	$ 3,667,373	
19	**Construction Subtotal:**	**$ 14,145,583**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 1,414,558	
21	Design Engineering & Management (15% of [1])	$ 2,121,838	
22	Construction Engineering & Management (10% of [1])	$ 1,414,558	
23	**Subtotal 5:**	**$ 4,950,954**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 1,732,834	
25	**Planning/Engineering Subtotal:**	**$ 6,683,788**	
26	Land, Easements and Right of Way Subtotal	$ 13,619,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 4,766,650	
28	**Planning/Engineering/ROW Subtotal:**	**$ 25,069,438**	**[2]**
29	**Total ([1] + [2]):**	**$ 39,215,022**	
30	**or Estimated as:**	**$ 39,200,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: D3A Kato road west of Milmont drive and Scott Road cost estimate.
Date: February 2004

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	358,041	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	89,510	1%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	105,785	1%
8d	Demolition (0% to 5% of Subtotal 1)*	$	162,746	2%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: E1A I680-I880 - Calaveras (widen 6)
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 489,875	
2	Pavement	$ 2,799,750	
3	Landscaping	$ -	
4	Structures:		
	a. Main street overpass	$ 4,635,400	
	b. Railroad overpass	$ 2,295,000	
	c. Barriers and Guardrails	$ 144,000	
	d.		
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 100,000	
	b. ITS	$ 50,000	
	c. Traffic Signals	$ 500,000	
	d. Sidwalk	$ 615,000	
7	**Subtotal 1:**	**$ 11,629,025**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 483,884	
9	Drainage (0% to 20% of Subtotal 1)*	$ 150,014	1%
10	Signing (0% to 5% of Subtotal 1)*	$ 75,007	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 100,010	1%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 125,012	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 300,029	3%
14	**Subtotal 2:**	**$ 1,233,956**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 12,862,981**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 1,286,298	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 14,149,279**	
18	Construction Contingency (35% of Subtotal 4)	$ 4,952,248	
19	**Construction Subtotal:**	**$ 19,101,527**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 1,910,153	
21	Design Engineering & Management (15% of [1])	$ 2,865,229	
22	Construction Engineering & Management (10% of [1])	$ 1,910,153	
23	**Subtotal 5:**	**$ 6,685,534**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 2,339,937	
25	**Planning/Engineering Subtotal:**	**$ 9,025,471**	
26	Land, Easements and Right of Way Subtotal	$ 5,133,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 1,796,550	
28	**Planning/Engineering/ROW Subtotal:**	**$ 15,955,021**	**[2]**
29	**Total ([1] + [2]):**	**$ 35,056,548**	
30	**or Estimated as:**	**$ 35,100,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: E1A I680-I880 - Calaveras (widen 6)
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	483,884	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	421,436	4%
8d	Demolition (0% to 5% of Subtotal 1)*	$	-	0%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	62,448	1%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: E3A I680-I880 - Calaveras Including median connection from overhead HOV.
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 733,035	
2	Pavement	$ 2,926,950	
3	Landscaping	$ -	
4	Structures:		
	a. Overhead HOV Structure	$ 50,625,000	
	b. Sidewalk	$ 200,000	
	c. Retaining Walls	$ 2,247,000	
	d. Barriers and Guardrails	$ 1,581,120	
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 500,000	
	b. ITS	$ 150,000	
	c. Traffic Signals	$ 500,000	
	d. Sidewalk	$ 200,000	
7	**Subtotal 1:**	**$ 59,663,105**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 799,665	
9	Drainage (0% to 20% of Subtotal 1)*	$ 249,988	0%
10	Signing (0% to 5% of Subtotal 1)*	$ 600,211	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 99,995	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 1,002,340	2%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 300,105	1%
14	**Subtotal 2:**	**$ 3,052,305**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 62,715,410**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 6,271,541	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 68,986,951**	
18	Construction Contingency (35% of Subtotal 4)	$ 24,145,433	
19	**Construction Subtotal:**	**$ 93,132,384**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 9,313,238	
21	Design Engineering & Management (15% of [1])	$ 13,969,858	
22	Construction Engineering & Management (10% of [1])	$ 9,313,238	
23	**Subtotal 5:**	**$ 32,596,334**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 11,408,717	
25	**Planning/Engineering Subtotal:**	**$ 44,005,051**	
26	Land, Easements and Right of Way Subtotal	$ 31,030,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 10,860,500	
28	**Planning/Engineering/ROW Subtotal:**	**$ 85,895,551**	**[2]**
29	**Total ([1] + [2]):**	**$ 179,027,935**	
30	**or Estimated as:**	**$ 179,000,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: E3A I680-I880 - Calaveras Including median connection from overhead HOV.
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	799,665	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	775,620	1%
8d	Demolition (0% to 5% of Subtotal 1)*	$	24,044	0%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: E3C I680-I880 -Calaveras_Elevated HOV Freeway 2 lanes cost estimate.
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 710,235	
2	Pavement	$ 4,777,500	
3	Landscaping	$ -	
4	Structures:		
	a. Overhead HOV Structure	$ 8,820,000	
	b. Overhead HOV Structure	$ 15,970,500	
	c. Widenning 3 Existing bridges	$ 15,644,475	
	d. Barriers and Guardrail	$ 315,000	
	e. Retaining Walls	$ 3,096,000	
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 500,000	
	b. ITS	$ 150,000	
	c. Traffic Signals	$ 500,000	
	d.		
7	**Subtotal 1:**	**$ 50,483,710**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 276,398	
9	Drainage (0% to 20% of Subtotal 1)*	$ 249,995	0%
10	Signing (0% to 5% of Subtotal 1)*	$ 687,336	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 100,008	0%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 1,000,082	2%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 300,025	1%
14	**Subtotal 2:**	**$ 2,613,845**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 53,097,555**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 5,309,755	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 58,407,310**	
18	Construction Contingency (35% of Subtotal 4)	$ 20,442,559	
19	**Construction Subtotal:**	**$ 78,849,869**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 7,884,987	
21	Design Engineering & Management (15% of [1])	$ 11,827,480	
22	Construction Engineering & Management (10% of [1])	$ 7,884,987	
23	**Subtotal 5:**	**$ 27,597,454**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 9,659,109	
25	**Planning/Engineering Subtotal:**	**$ 37,256,563**	
26	Land, Easements and Right of Way Subtotal	$ 13,619,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 4,766,650	
28	**Planning/Engineering/ROW Subtotal:**	**$ 55,642,213**	**[2]**
29	**Total ([1] + [2]):**	**$ 134,492,081**	
30	**or Estimated as:**	**$ 134,500,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: E3C I680-I880 -Calaveras_Elevated HOV Freeway 2 lanes cost estimate.
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	276,398	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	252,419	1%
8d	Demolition (0% to 5% of Subtotal 1)*	$	23,980	0%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: F3D I680-I880 - F3D Montague Elevated HOV direct connector.
Date: November 2003

Item	Description	Cost	%
1	Earthwork	$ 1,360,000	
2	Pavement	$ 6,000,000	
3	Landscaping	$ -	
4	Structures:		
	a. EB HOV bridge	$ 7,560,000	
	b. WB HOV bridge	$ 7,182,000	
	c. BART OC	$ 3,412,500	
	d. Barriers and Guardrails	$ 360,000	
	e. Retaining Walls	$ 1,500,000	
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 200,000	
	b. ITS	$ 200,000	
	c. Traffic Signals	$ 200,000	
	d.		
7	**Subtotal 1:**	**$ 27,974,500**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 1,500,133	
9	Drainage (0% to 20% of Subtotal 1)*	$ 300,027	1%
10	Signing (0% to 5% of Subtotal 1)*	$ 150,223	1%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 489,554	2%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 200,018	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 500,744	2%
14	**Subtotal 2:**	**$ 3,140,697**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 31,115,197**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 3,111,520	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 34,226,717**	
18	Construction Contingency (35% of Subtotal 4)	$ 11,979,351	
19	**Construction Subtotal:**	**$ 46,206,068**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 4,620,607	
21	Design Engineering & Management (15% of [1])	$ 6,930,910	
22	Construction Engineering & Management (10% of [1])	$ 4,620,607	
23	**Subtotal 5:**	**$ 16,172,124**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 5,660,243	
25	**Planning/Engineering Subtotal:**	**$ 21,832,367**	
26	Land, Easements and Right of Way Subtotal	$ 16,500,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 5,775,000	
28	**Planning/Engineering/ROW Subtotal:**	**$ 44,107,367**	**[2]**
29	**Total ([1] + [2]):**	**$ 90,313,435**	
30	**or Estimated as:**	**$ 90,300,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: F3D I680-I880 - F3D Montague Elevated HOV direct connector.
Date: November 2003

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	1,500,133	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	1,000,088	4%
8d	Demolition (0% to 5% of Subtotal 1)*	$	500,044	2%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	-	0%

* Suggested ranges; use % closest to calculated estimate.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Auto Mall Parkway between I-680 & I-880 (East of Grimmer Blvd.), City of Fremont, Alameda County

Proposed Improvement (Scope) Widen Auto Mall Parkway to 6 lanes, 3 in each direction with dual left-turn lanes at all intersections.

Alternate A1A

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$13,098,360
TOTAL STRUCTURE ITEMS	$2,051,000
SUBTOTAL CONSTRUCTION COSTS	$15,149,360
TOTAL RIGHT OF WAY ITEMS (Current Value)	$911,510
TOTAL PROJECT CAPITAL OUTLAY COSTS	$16,060,870

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	29500	M3	$25	$737,500	
Imported Borrow	6800	M3	$20	$136,000	
Clearing & Grubbing	1	LS	$385,000	$385,000	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$1,258,500
Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	20615	M2	$150	$3,092,250	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	2640	M2	$40	$105,600	
	Subtotal Pavement Structural Section				$3,197,850
Section 3 Drainage					
Large Drainage Facilities	1	LS	$150,000	$150,000	
Storm Drains		LS	$0	$0	
Pumping Plants		LS			
Project Drainage (X-Drains, overside, etc.)			$0	$0	
			Subtotal Drainage		$150,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls		M	$750	$0	
Noise Barriers (H=4.3m)		M	$1,800		
Barriers and Guardrails	1360	M	$180	$244,800	
Equipment/Animal Passes		LS			
Highway Planting		LS			
Replacement Planting		LS			
Irrigation Modification		LS			
Relocate Private Irrigation Facilities		LS			
Erosion Control	1	LS	$229,800	$229,800	
Slope Protection		LS	$0	$0	
Water Pollution Control			$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$200,000	$200,000	
Resident Engineer Office Space					
Curb & Gutter		M	$0	$0	
Median Curb		M	$0	$0	
Side Walk	13113	M2	$100	$1,311,300	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$1,985,900

Section 5 Traffic Items					
Lighting	1	LS	$100,000	$100,000	
Traffic Delineation Items	1	LS	$50,000	$50,000	
Traffic Signals	1	LS	$400,000	$400,000	
Overhead Sign Structures			$0	$0	
Roadside Signs		LS	$0	$0	
Traffic Control Systems	1	LS	$150,000	$150,000	
Transportation Management Plan	1	LS	$150,000	$150,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$850,000
		TOTAL SECTIONS 1 thru 5			$7,442,250

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items				Item Cost	Section Cost
	$7,442,250 (Subtotal Sections 1 thru 5)	x 10%	=	$744,225	
	TOTAL MINOR ITEMS				$744,225

Section 7 Roadway Mobilization					
	$8,186,475 (Subtotal Sections 1 thru 6)	x 10%	=	$818,648	
	TOTAL ROADWAY MOBILIZATION				$818,648

Section 8 Roadway Additions

Supplemental Work	$8,186,475 (Subtotal Sections 1 thru 6)	x 10%	=	$818,648	
Contingencies	$8,186,475 (Subtotal Sections 1 thru 6)	x 40% (**%)	=	$3,274,590	
	TOTAL ROADWAY ADDITIONS				$4,093,238
	TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)				$13,098,360

Estimate Prepared By Scott Wagner (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Railway Overpass	680 Overpass	
Structure Type	Conc Single Span Widening	Conc Single Span Widening	
Width (out to out) - (m)	10	6	
Span Lengths - (m)	62	92	
Total Area - (m2)	620	552	
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,750	$1,750	
Total Cost for Structure	$1,085,000	$966,000	

SUBTOTAL STRUCTURES ITEMS $2,051,000
(Sum of Total Cost for Structures)

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $2,051,000
(Sum of Structures Items plus Railroad Items)

COMMENTS:

Estimate Prepared By Scott Wagner (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$411,510	
B. Utility Relocation (State share)	$500,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $911,510

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Scott Wagner (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Fremont Blvd and Grimmer Blvd between I-680 & I-880, City of Fremont, Alameda County

Proposed Improvement (Scope) Widen Fremont Blvd & Grimmer Blvd to 6 lanes, 2 mixed flow lanes and 1 HOV lane in each direction. Demolish portion of I680 bridge to build 2 HOV lanes in I680 median.

Alternate B1B

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$28,110,368
TOTAL STRUCTURE ITEMS	$1,000,860
SUBTOTAL CONSTRUCTION COSTS	$29,111,228
TOTAL RIGHT OF WAY ITEMS (Current Value)	$15,500,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$44,611,228

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	49600	M3	$25	$1,240,000	
Imported Borrow	0	M3	$20	$0	
Clearing & Grubbing	1	LS	$1,200,000	$1,200,000	
Develop Water Supply	1	LS	$0	$0	
Demolition	1	LS	$0	$0	
			Subtotal Earthwork		$2,440,000

Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	45500	M2	$150	$6,825,000	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	4200	M2	$40	$168,000	
	Subtotal Pavement Structural Section				$6,993,000

Section 3 Drainage					
Large Drainage Facilities	1	LS	$200,000	$200,000	
Storm Drains	1	LS	$0	$0	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)	1	LS	$0	$0	
			Subtotal Drainage		$200,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	3300	M2	$750	$2,475,000	
Noise Barriers (H=4.3m)	0	M	$1,800	$0	
Barriers and Guardrails	2300	M	$180	$414,000	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification					
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$100,000	$100,000	
Resident Engineer Office Space					
Curb & Gutter		M	$0	$0	
Median Curb		M	$0	$0	
Side Walk	19000	M2	$100	$1,900,000	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Bridge Removal	246	M2	$1,300	$319,800	
		Subtotal Specialty Items			$5,308,800

Section 5 Traffic Items					
Lighting	1	LS	$100,000	$100,000	
Traffic Delineation Items	1	LS	$130,000	$130,000	
Traffic Signals	1	LS	$600,000	$600,000	
Overhead Sign Structures			$0	$0	
Roadside Signs	1	LS	$0	$0	
Traffic Control Systems	1	LS	$100,000	$100,000	
Transportation Management Plan	1	LS	$100,000	$100,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification	1	LS	$0	$0	
			Subtotal Traffic Items		$1,030,000
		TOTAL SECTIONS 1 thru 5			$15,971,800

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items			Item Cost	Section Cost
$15,971,800 (Subtotal Sections 1 thru 5)	x	10%	= $1,597,180	
TOTAL MINOR ITEMS				$1,597,180

Section 7 Roadway Mobilization				
$17,568,980 (Subtotal Sections 1 thru 6)	x	10%	= $1,756,898	
TOTAL ROADWAY MOBILIZATION				$1,756,898

Section 8 Roadway Additions

Supplemental Work

$17,568,980 (Subtotal Sections 1 thru 6)	x	10%	= $1,756,898	

Contingencies

$17,568,980 (Subtotal Sections 1 thru 6)	x	40% (**%)	= $7,027,592	
TOTAL ROADWAY ADDITIONS				$8,784,490
TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)				$28,110,368

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	SB I680 Bridge	NB I680 Bridge	
Structure Type	Conc Single Span Widening	Conc Single Span Widening	
Width (out to out) - (m)	5.6	8	
Span Lengths - (m)	41.7	42.3	
Total Area - (m2)	233.52	338.4	
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,750	$1,750	
Total Cost for Structure	$408,660	$592,200	

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures) $1,000,860

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items) $1,000,860

COMMENTS:

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$15,500,000	
B. Utility Relocation (State share)	$0	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $15,500,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Fremont Blvd and Grimmer Blvd between I-680 & I-880, City of Fremont, Alameda County

Proposed Improvement (Scope) Construct 2-lane elevated HOV freeway connector between I880 and I680 parallel to Fremont Blvd and Grimmer Blvd.

Alternate B2C

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$27,810,464
TOTAL STRUCTURE ITEMS	$63,909,000
SUBTOTAL CONSTRUCTION COSTS	$91,719,464
TOTAL RIGHT OF WAY ITEMS (Current Value)	$65,250,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$156,969,464

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	43000	M3	$25	$1,075,000	
Imported Borrow	32000	M3	$20	$640,000	
Clearing & Grubbing	1	LS	$1,100,000	$1,100,000	
Develop Water Supply	1	LS	$0	$0	
Demolition (Buildings)	1	LS	$700,000	$700,000	
			Subtotal Earthwork		$3,515,000
Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	43000	M2	$150	$6,450,000	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	2160	M2	$40	$86,400	
	Subtotal Pavement Structural Section				$6,536,400
Section 3 Drainage					
Large Drainage Facilities	1	LS	$200,000	$200,000	
Storm Drains	1	LS	$0	$0	
Pumping Plants					
Project Drainage (X-Drains, overside, etc.)	1	LS	$0	$0	
			Subtotal Drainage		$200,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	3800	M2	$750	$2,850,000	
Noise Barriers (H=4.3m)	800	M	$1,800	$1,440,000	
Barriers and Guardrails	2000	M	$180	$360,000	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification					
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$200,000	$200,000	
Resident Engineer Office Space					
Curb & Gutter	0	M	$0	$0	
Median Curb	0	M	$0	$0	
Side Walk	0	M2	$100	$0	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$4,950,000

Section 5 Traffic Items					
Lighting	1	LS	$150,000	$150,000	
Traffic Delineation Items	1	LS	$150,000	$150,000	
Traffic Signals	1	LS	$0	$0	
Overhead Sign Structures					
Roadside Signs	1	LS	$0	$0	
Traffic Control Systems	1	LS	$150,000	$150,000	
Transportation Management Plan	1	LS	$150,000	$150,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification	1	LS	$0	$0	
			Subtotal Traffic Items		$600,000
		TOTAL SECTIONS 1 thru 5			$15,801,400

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$15,801,400 x 10% = (Subtotal Sections 1 thru 5)	$1,580,140	
	TOTAL MINOR ITEMS		$1,580,140

Section 7 Roadway Mobilization			
	$17,381,540 x 10% = (Subtotal Sections 1 thru 6)	$1,738,154	
	TOTAL ROADWAY MOBILIZATION		$1,738,154

Section 8 Roadway Additions

Supplemental Work			
	$17,381,540 x 10% = (Subtotal Sections 1 thru 6)	$1,738,154	
Contingencies			
	$17,381,540 x 40% = (Subtotal Sections 1 thru 6) (**%)	$6,952,616	
	TOTAL ROADWAY ADDITIONS		$8,690,770
	TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		$27,810,464

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	2-Lane HOV Bridge		
Structure Type	CIP Concrete Bridge		
Width (out to out) - (m)	16.2		
Span Lengths - (m)	2630		
Total Area - (m2)	42606		
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,500		
Total Cost for Structure	$63,909,000		

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures) $63,909,000

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items) $63,909,000

COMMENTS:

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$65,000,000	
B. Utility Relocation (State share)	$250,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $65,250,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Mission Boulevard between I-880 & I-680, City of Fremont, Alameda County

Proposed Improvement (Scope) Mission Blvd/Warm Springs Blvd Tunnel.

Alternate C1A

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$52,540,787
TOTAL STRUCTURE ITEMS	$258,000,000
SUBTOTAL CONSTRUCTION COSTS	$310,540,787
TOTAL RIGHT OF WAY ITEMS (Current Value)	$1,700,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$312,240,787

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	213744	M3	$25	$5,343,600	

Imported Borrow	0	M3	$20	$0	
Clearing & Grubbing	1	LS	$679,000	$679,000	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$6,022,600
Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	49221	M2	$150	$7,383,150	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	30000	M2	$40	$1,200,000	
	Subtotal Pavement Structural Section				$8,583,150
Section 3 Drainage					
Large Drainage Facilities	1	LS	$5,200,000	$5,200,000	
Storm Drains		LS		$0	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)		LS	$0	$0	
			Subtotal Drainage		$5,200,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	6943	M2	$750	$5,207,250	
Noise Barriers (H=4.3m)		M	$1,800	$0	
Barriers and Guardrails		M	$180	$0	
Equipment/Animal Passes					

Highway Planting					
Replacement Planting					
Irrigation Modification	1	LS	$100,000	$100,000	
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$100,000	$100,000	
Resident Engineer Office Space	1	LS	$150,000	$150,000	
Curb & Gutter	2844	M	$80	$227,520	
Median Curb		M	$0	$0	
Side Walk	14482	M2	$100	$1,448,200	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
			Subtotal Specialty Items		$7,332,970

Section 5 Traffic Items					
Lighting	1	LS	$1,000,000	$1,000,000	
Traffic Delineation Items	1	LS	$114,000	$114,000	
Traffic Signals	1	LS	$400,000	$400,000	
Overhead Sign Structures	1	LS	$500,000	$500,000	
Roadside Signs	1	LS	$50,000	$50,000	
Traffic Control Systems	1	LS	$500,000	$500,000	
Transportation Management Plan	1	LS	$150,000	$150,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$2,714,000

TOTAL SECTIONS 1 thru 5	$29,852,720

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items				Item Cost	Section Cost
$29,852,720 (Subtotal Sections 1 thru 5)	x	10%	=	$2,985,272	
TOTAL MINOR ITEMS					$2,985,272

Section 7 Roadway Mobilization

$32,837,992 x 10% = $3,283,799
(Subtotal Sections 1 thru 6)

TOTAL ROADWAY MOBILIZATION $3,283,799

Section 8 Roadway Additions

Supplemental Work

$32,837,992 x 10% = $3,283,799
(Subtotal Sections 1 thru 6)

Contingencies

$32,837,992 x 40% = $13,135,197
(Subtotal Sections 1 thru 6) (**%)

TOTAL ROADWAY ADDITIONS $16,418,996

TOTAL ROADWAY ITEMS $52,540,787
(Subtotal Sections 1 thru 8)

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Tunnel HOV Structure	Overhead HOV Structure	Widening Three existing bridges
Structure Type	CIP Concrete tunnel	CIP Concrete Bridge	CIP Concrete Bridge
Width (out to out) - (m)	27.5		
Lengths - (m)	1032		

Total Area - (m2)	28380		
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$250,000		
Total Cost for Structure	$258,000,000		

SUBTOTAL STRUCTURES ITEMS $258,000,000
(Sum of Total Cost for Structures)

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $258,000,000
(Sum of Structures Items plus Railroad Items)

COMMENTS:

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$0	
B. Utility Relocation (State share)	$500,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$1,200,000	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS $1,700,000
(Current Value)

Anticipated Date of Right of Way Certification _____
(Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Ricardo Morales Phone # 408-392-7200 Date 7/18/2003
(Print Name)

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Mission Boulevard between I-880 & I-680, City of Fremont, Alameda County

Proposed Improvement (Scope) Mission Blvd/Warm Springs Blvd Tunnel.

Alternate C1D

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$58,744,611
TOTAL STRUCTURE ITEMS	$524,500,000
SUBTOTAL CONSTRUCTION COSTS	$583,244,611
TOTAL RIGHT OF WAY ITEMS (Current Value)	$1,700,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$584,944,611

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	439596	M3	$25	$10,989,900	

Imported Borrow	0	M3	$20	$0	
Clearing & Grubbing	1	LS	$1,200,000	$1,200,000	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$12,189,900
Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	40824	M2	$150	$6,123,600	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	30000	M2	$40	$1,200,000	
	Subtotal Pavement Structural Section				$7,323,600
Section 3 Drainage					
Large Drainage Facilities	1	LS	$7,046,500	$7,046,500	
Storm Drains		LS		$0	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)		LS	$0	$0	
			Subtotal Drainage		$7,046,500

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	2880	M2	$750	$2,160,000	
Noise Barriers (H=4.3m)		M	$1,800	$0	
Barriers and Guardrails		M	$180	$0	
Equipment/Animal Passes					

Highway Planting					
Replacement Planting					
Irrigation Modification	1	LS	$100,000	$100,000	
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$100,000	$100,000	
Resident Engineer Office Space	1	LS	$150,000	$150,000	
Curb & Gutter	2844	M	$80	$227,520	
Median Curb		M	$0	$0	
Side Walk	14482	M2	$100	$1,448,200	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
			Subtotal Specialty Items		$4,285,720
Section 5 Traffic Items					
Lighting	1	LS	$1,000,000	$1,000,000	
Traffic Delineation Items	1	LS	$131,900	$131,900	
Traffic Signals	1	LS	$200,000	$200,000	
Overhead Sign Structures	1	LS	$500,000	$500,000	
Roadside Signs	1	LS	$50,000	$50,000	
Traffic Control Systems	1	LS	$500,000	$500,000	
Transportation Management Plan	1	LS	$150,000	$150,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$2,531,900
			TOTAL SECTIONS 1 thru 5		$33,377,620

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items				Item Cost	Section Cost
$33,377,620 (Subtotal Sections 1 thru 5)	x	10%	=	$3,337,762	
TOTAL MINOR ITEMS					$3,337,762

Section 7 Roadway Mobilization

$36,715,382 x 10% = $3,671,538
(Subtotal Sections 1 thru 6)

TOTAL ROADWAY MOBILIZATION $3,671,538

Section 8 Roadway Additions

Supplemental Work

$36,715,382 x 10% = $3,671,538
(Subtotal Sections 1 thru 6)

Contingencies

$36,715,382 x 40% = $14,686,153
(Subtotal Sections 1 thru 6) (**%)

TOTAL ROADWAY ADDITIONS $18,357,691

TOTAL ROADWAY ITEMS $58,744,611
(Subtotal Sections 1 thru 8)

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Tunnel HOV Structure	Overhead HOV Structure	Widening Three existing bridges
Structure Type	CIP Concrete tunnel	CIP Concrete Bridge	CIP Concrete Bridge
Width (out to out) - (m)	27.5		
Lengths - (m)	2098		

Total Area - (m2)	57695		
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$250,000		
Total Cost for Structure	$524,500,000		

SUBTOTAL STRUCTURES ITEMS $524,500,000
(Sum of Total Cost for Structures)

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $524,500,000
(Sum of Structures Items plus Railroad Items)

COMMENTS:

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$0	
B. Utility Relocation (State share)	$500,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$1,200,000	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS $1,700,000
(Current Value)

Anticipated Date of Right of Way Certification _____
(Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Ricardo Morales Phone # 408-392-7200 Date 7/18/2003
(Print Name)

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Mission Boulevard between I-880 & I-680, City of Fremont, Alameda County

Proposed Improvement (Scope) Mission Blvd/Warm Springs Blvd grade separation and improve I-680

Alternate C2B

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$35,600,400
TOTAL STRUCTURE ITEMS	$3,150,000
SUBTOTAL CONSTRUCTION COSTS	$38,750,400
TOTAL RIGHT OF WAY ITEMS (Current Value)	$9,500,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$48,250,400

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	26500	M3	$25	$662,500	
Imported Borrow	0	M3	$20	$0	
Clearing & Grubbing	1	LS	$755,000	$755,000	
Develop Water Supply	1	LS	$0	$0	
Demolition	1	LS	$0	$0	
Excavation(Depress)	28000	M3	$25	$700,000	
			Subtotal Earthwork		$2,117,500

Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	62500	M2	$150	$9,375,000	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	47600	M2	$40	$1,904,000	
	Subtotal Pavement Structural Section				$11,279,000

Section 3 Drainage					
Large Drainage Facilities	1	LS	$250,000	$250,000	
Storm Drains	1	LS	$36,000	$36,000	
Pumping Plants	1	LS	$0	$0	
Project Drainage (X-Drains, overside, etc.)	1	LS	$0	$0	
			Subtotal Drainage		$286,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	3300	M2	$750	$2,475,000	
Noise Barriers (H=4.3m)		M	$1,800	$0	
Barriers and Guardrails		M	$180	$0	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification					
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation		LS	$0	$0	
Resident Engineer Office Space	1	LS	$100,000	$100,000	
Curb & Gutter	3600	M	$50	$180,000	
Median Curb	1600	M	$35	$56,000	
Side Walk	5300	M2	$100	$530,000	
Landscaping/Irrigation	1	LS	$250,000	$250,000	
SWPPP	1	LS	$25,000	$25,000	
Sound Wall					
Utilities (Gas, Elec., Water, sewer)	1	LS	$930,000	$930,000	
			Subtotal Specialty Items		$4,646,000
Section 5 Traffic Items					
Lighting	1	LS	$200,000	$200,000	
Traffic Delineation Items	1	LS	$49,000	$49,000	
Traffic Signals	1	LS	$1,000,000	$1,000,000	
Overhead Sign Structures	1	LS	$100,000	$100,000	
Roadside Signs	1	LS	$50,000	$50,000	
Traffic Control Systems	1	LS	$150,000	$150,000	
Transportation Management Plan	1	LS	$250,000	$250,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification	1	LS	$100,000	$100,000	
			Subtotal Traffic Items		$1,899,000
			TOTAL SECTIONS 1 thru 5		$20,227,500

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$20,227,500 x 10% = (Subtotal Sections 1 thru 5)	$2,022,750	
	TOTAL MINOR ITEMS		$2,022,750

Section 7 Roadway Mobilization			
	$22,250,250 x 10% = (Subtotal Sections 1 thru 6)	$2,225,025	
	TOTAL ROADWAY MOBILIZATION		$2,225,025

Section 8 Roadway Additions

Supplemental Work			
	$22,250,250 x 10% = (Subtotal Sections 1 thru 6)	$2,225,025	
Contingencies			
	$22,250,250 x 40% = (Subtotal Sections 1 thru 6) (**%)	$8,900,100	
	TOTAL ROADWAY ADDITIONS		$11,125,125
	TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		$35,600,400

Estimate Prepared By Samuel Aguirre (Print Name) Phone # (408)-392-7240 Date 9/11/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Warm Springs/Mission grade separation		
Structure Type	CIP Concrete		
Width (out to out) - (m)	40		
Span Lengths - (m)	45		
Total Area - (m2)	1800	0	
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,750	$0	
Total Cost for Structure	$3,150,000	$0	

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures) $3,150,000

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items) $3,150,000

COMMENTS:

Estimate Prepared By Samuel Aguirre (Print Name) Phone # (408)-392-7240 Date 9/11/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$9,500,000	
B. Utility Relocation (State share)	$0	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $9,500,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Samuel Aguirre (Print Name) Phone # (408) 392-7240 Date 9/11/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Kato Road west of Milmont Drive and Scott Creek Road, City of Fremont, Alameda County

Proposed Improvement (Scope) New I-880 Overcrossing from Kato Road to the future alignment for Fremont Boulevard. Note this estimate only includes work from west of the Kato/Milmont intersection.

Alternate D3A

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$13,899,688
TOTAL STRUCTURE ITEMS	$2,145,000
SUBTOTAL CONSTRUCTION COSTS	$16,044,688
TOTAL RIGHT OF WAY ITEMS (Current Value)	$8,635,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$24,679,688

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	1790	M3	$25	$44,750	
Imported Borrow	35625	M3	$20	$712,500	
Clearing & Grubbing	1	LS	$104,250	$104,250	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$861,500

Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	15770	M2	$150	$2,365,500	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	4000	M2	$40	$160,000	
	Subtotal Pavement Structural Section				$2,525,500

Section 3 Drainage					
Large Drainage Facilities	0	LS	$0	$0	
Storm Drains	1	LS	$122,500	$122,500	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)		LS	$0	$0	
Electric Tower	1	LS	$500,000	$500,000	
			Subtotal Drainage		$622,500

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	3325	M2	$750	$2,493,750	
Noise Barriers (H=4.3m)		M	$1,800	$0	
Barriers and Guardrails	1010	M	$180	$181,800	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification	1	LS	$50,000	$50,000	
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$50,000	$50,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$50,000	$50,000	
Resident Engineer Office Space	1	LS	$50,000	$50,000	
Curb & Gutter		M	$0	$0	
Median Curb		M	$0	$0	
Side Walk	2875	M2	$100	$287,500	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$3,163,050

Section 5 Traffic Items					
Lighting	1	LS	$100,000	$100,000	
Traffic Delineation Items	1	LS	$15,000	$15,000	
Traffic Signals	1	LS	$500,000	$500,000	
Overhead Sign Structures			$0	$0	
Roadside Signs	1	LS	$10,000	$10,000	
Traffic Control Systems	1	LS	$50,000	$50,000	
Transportation Management Plan	1	LS	$50,000	$50,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$725,000
		TOTAL SECTIONS 1 thru 5			$7,897,550

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$7,897,550 x 10% =	$789,755	
	(Subtotal Sections 1 thru 5)		
	TOTAL MINOR ITEMS		$789,755

Section 7 Roadway Mobilization			
	$8,687,305 x 10% =	$868,731	
	(Subtotal Sections 1 thru 6)		
	TOTAL ROADWAY MOBILIZATION		$868,731

Section 8 Roadway Additions

Supplemental Work			
	$8,687,305 x 10% =	$868,731	
	(Subtotal Sections 1 thru 6)		
Contingencies			
	$8,687,305 x 40% =	$3,474,922	
	(Subtotal Sections 1 thru 6) (**%)		
	TOTAL ROADWAY ADDITIONS		$4,343,653
	TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		$13,899,688

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	I-880 Overpass		
Structure Type	Conc Single Span		
Width (out to out) - (m)	26		
Span Lengths - (m)	55		
Total Area - (m2)	1430	0	
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,500	$0	
Total Cost for Structure	$2,145,000	$0	

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures) $2,145,000

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items) $2,145,000

COMMENTS:

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$8,560,000	
B. Utility Relocation (State share)	$75,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $8,635,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

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_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Calaveras Blvd between Abbott Ave & Town Center Drive, City of Milpitas, Santa Clara County

Proposed Improvement (Scope) Widening Calaveras Boulevard to 6 lanes, 3 in each direction with auxiliary lanes.

Alternate E1A

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$10,245,532
TOTAL STRUCTURE ITEMS	$10,192,000
SUBTOTAL CONSTRUCTION COSTS	$20,437,532
TOTAL RIGHT OF WAY ITEMS (Current Value)	$5,133,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$25,570,532

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	19595	M3	$25	$489,875	
Imported Borrow	0	M3	$20	$0	
Clearing & Grubbing	1	LS	$435,300	$435,300	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$925,175

Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	18665	M2	$150	$2,799,750	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	1560	M2	$40	$62,400	
	Subtotal Pavement Structural Section				$2,862,150

Section 3 Drainage					
Large Drainage Facilities	0	LS	$0	$0	
Storm Drains	1	LS	$150,000	$150,000	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)		LS	$0	$0	
			Subtotal Drainage		$150,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	0	M2	$750	$0	
Noise Barriers (H=4.3m)	0	M	$1,800	$0	
Barriers and Guardrails	800	M	$180	$144,000	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification	1	LS	$100,000	$100,000	
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$100,000	$100,000	
Resident Engineer Office Space	1	LS	$75,000	$75,000	
Curb & Gutter		M	$0	$0	
Median Curb		M	$0	$0	
Side Walk	6150	M2	$100	$615,000	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$1,134,000

Section 5 Traffic Items					
Lighting	1	LS	$125,000	$125,000	
Traffic Delineation Items	1	LS	$25,000	$25,000	
Traffic Signals	1	LS	$400,000	$400,000	
Overhead Sign Structures			$0	$0	
Roadside Signs	1	LS	$50,000	$50,000	
Traffic Control Systems	1	LS	$100,000	$100,000	
Transportation Management Plan	1	LS	$50,000	$50,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$750,000
		TOTAL SECTIONS 1 thru 5			$5,821,325

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$5,821,325 x 10% =	$582,133	
	(Subtotal Sections 1 thru 5)		
	TOTAL MINOR ITEMS		$582,133

Section 7 Roadway Mobilization		
$6,403,458 x 10% =	$640,346	
(Subtotal Sections 1 thru 6)		
TOTAL ROADWAY MOBILIZATION		$640,346

Section 8 Roadway Additions

Supplemental Work

$6,403,458 x 10% = $640,346
(Subtotal Sections 1 thru 6)

Contingencies

$6,403,458 x 40% = $2,561,383
(Subtotal Sections 1 thru 6) (**%)

TOTAL ROADWAY ADDITIONS	$3,201,729
TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	$10,245,532

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Main Street Overpass	Railroad Overpass	
Structure Type	Conc Single Span Widening	Conc Single Span Widening	
Width (out to out) - (m)	22	17	
Span Lengths - (m)	172	120	
Total Area - (m2)	3784	2040	
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,750	$1,750	
Total Cost for Structure	$6,622,000	$3,570,000	

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures) $10,192,000

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items) $10,192,000

COMMENTS:

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$4,883,000	
B. Utility Relocation (State share)	$250,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $5,133,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Highway237/Calaveras Blvd between Calaveras/I-880 interchange and I-680/Calaveras interchange, including median connection from Overhead HOV, City of Milpitas, Santa Clara County

Proposed Improvement (Scope) Overhead HOV from I-880 O/C along Serra Way/Los Coches

*Note this estimate does not include potential widening required at Calaveras/I-680 bridge.

Alternate E3A

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$20,965,305
TOTAL STRUCTURE ITEMS	$67,500,000
SUBTOTAL CONSTRUCTION COSTS	$88,465,305
TOTAL RIGHT OF WAY ITEMS (Current Value)	$31,530,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$119,995,305

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	12507	M3	$25	$312,675	
Imported Borrow	21018	M3	$20	$420,360	
Clearing & Grubbing	1	LS	$750,000	$750,000	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$1,483,035
Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	19513	M2	$150	$2,926,950	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	600	M2	$40	$24,000	
	Subtotal Pavement Structural Section				$2,950,950
Section 3 Drainage					
Large Drainage Facilities	0	LS	$0	$0	
Storm Drains	1	LS	$250,000	$250,000	
Pumping Plants					
Project Drainage (X-Drains, overside, etc.)		LS	$0	$0	
			Subtotal Drainage		$250,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	2996	M2	$750	$2,247,000	
Noise Barriers (H=4.3m)		M	$1,800	$0	
Barriers and Guardrails	8784	M	$180	$1,581,120	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification	1	LS	$100,000	$100,000	
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$100,000	$100,000	
Resident Engineer Office Space	1	LS	$150,000	$150,000	
Curb & Gutter		M	$0	$0	
Median Curb		M	$0	$0	
Side Walk	2000	M2	$100	$200,000	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$4,478,120

Section 5 Traffic Items					
Lighting	1	LS	$1,000,000	$1,000,000	
Traffic Delineation Items	1	LS	$50,000	$50,000	
Traffic Signals	1	LS	$500,000	$500,000	
Overhead Sign Structures	1	LS	$500,000	$500,000	
Roadside Signs	1	LS	$50,000	$50,000	
Traffic Control Systems	1	LS	$500,000	$500,000	
Transportation Management Plan	1	LS	$150,000	$150,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$2,750,000
		TOTAL SECTIONS 1 thru 5			$11,912,105

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$11,912,105 x 10% =	$1,191,211	
	(Subtotal Sections 1 thru 5)		
	TOTAL MINOR ITEMS		$1,191,211

Section 7 Roadway Mobilization			
	$13,103,316 x 10% =	$1,310,332	
	(Subtotal Sections 1 thru 6)		
	TOTAL ROADWAY MOBILIZATION		$1,310,332

Section 8 Roadway Additions

Supplemental Work

$13,103,316 x 10% = $1,310,332
(Subtotal Sections 1 thru 6)

Contingencies

$13,103,316 x 40% = $5,241,326
(Subtotal Sections 1 thru 6) (**%)

TOTAL ROADWAY ADDITIONS		$6,551,658
TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		$20,965,305

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Overhead HOV Structure		
Structure Type	CIP Concrete Bridge		
Width (out to out) - (m)	18		
Span Lengths - (m)	2500		
Total Area - (m2)	45000	0	
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,500	$0	
Total Cost for Structure	$67,500,000	$0	

SUBTOTAL STRUCTURES ITEMS $67,500,000
(Sum of Total Cost for Structures)

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $67,500,000
(Sum of Structures Items plus Railroad Items)

COMMENTS:

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$31,030,000	
B. Utility Relocation (State share)	$500,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $31,530,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Mike Sondag (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Highway237/Calaveras Blvd between Calaveras/I-880 interchange and I-680/Calaveras interchange, including median connection from Overhead HOV, City of Milpitas, Santa Clara County

Proposed Improvement (Scope) Overhead HOV from I-880 O/C along Calaveras Blvd

*Note this estimate does not include potential widening required at Calaveras/I-680 bridge.

Alternate E3C

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$22,316,400
TOTAL STRUCTURE ITEMS	$57,764,250
SUBTOTAL CONSTRUCTION COSTS	$80,080,650
TOTAL RIGHT OF WAY ITEMS (Current Value)	$13,619,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$93,699,650

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	21787	M3	$25	$544,675	
Imported Borrow	8278	M3	$20	$165,560	
Clearing & Grubbing	1	LS	$219,740	$219,740	
Develop Water Supply		LS	$0	$0	
Demolition		LS	$0	$0	
			Subtotal Earthwork		$929,975
Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	31850	M2	$150	$4,777,500	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement	600	M2	$40	$24,000	
	Subtotal Pavement Structural Section				$4,801,500
Section 3 Drainage					
Large Drainage Facilities	0	LS	$0	$0	
Storm Drains	1	LS	$250,000	$250,000	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)		LS	$0	$0	
			Subtotal Drainage		$250,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	4128	M2	$750	$3,096,000	
Noise Barriers (H=4.3m)		M	$1,800	$0	
Barriers and Guardrails	1750	M	$180	$315,000	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification	1	LS	$100,000	$100,000	
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$100,000	$100,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$100,000	$100,000	
Resident Engineer Office Space	1	LS	$150,000	$150,000	
Curb & Gutter		M	$0	$0	
Median Curb		M	$0	$0	
Side Walk	0	M2	$100	$0	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$3,861,000

Section 5 Traffic Items					
Lighting	1	LS	$1,000,000	$1,000,000	
Traffic Delineation Items	1	LS	$137,298	$137,298	
Traffic Signals	1	LS	$500,000	$500,000	
Overhead Sign Structures	1	LS	$500,000	$500,000	
Roadside Signs	1	LS	$50,000	$50,000	
Traffic Control Systems	1	LS	$500,000	$500,000	
Transportation Management Plan	1	LS	$150,000	$150,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification		LS	$0	$0	
			Subtotal Traffic Items		$2,837,298
		TOTAL SECTIONS 1 thru 5			$12,679,773

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$12,679,773 x 10% =	$1,267,977	
	(Subtotal Sections 1 thru 5)		
	TOTAL MINOR ITEMS		$1,267,977

Section 7 Roadway Mobilization			
	$13,947,750 x 10% =	$1,394,775	
	(Subtotal Sections 1 thru 6)		
	TOTAL ROADWAY MOBILIZATION		$1,394,775

Section 8 Roadway Additions

Supplemental Work

$13,947,750 x 10% = $1,394,775
(Subtotal Sections 1 thru 6)

Contingencies

$13,947,750 x 40% = $5,579,100
(Subtotal Sections 1 thru 6) (**%)

TOTAL ROADWAY ADDITIONS		$6,973,875
TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		$22,316,400

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	Overhead HOV Structure	Overhead HOV Structure	Widening Three existing bridges
Structure Type	CIP Concrete Bridge	CIP Concrete Bridge	CIP Concrete Bridge
Width (out to out) - (m)	14	18	33
Span Lengths - (m)	600	845	387
Total Area - (m2)	8400	15210	12771
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,500	$1,500	$1,750
Total Cost for Structure	$12,600,000	$22,815,000	$22,349,250

SUBTOTAL STRUCTURES ITEMS $57,764,250
(Sum of Total Cost for Structures)

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $57,764,250
(Sum of Structures Items plus Railroad Items)

COMMENTS:

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$13,119,000	
B. Utility Relocation (State share)	$500,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $13,619,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Ricardo Morales (Print Name) Phone # 408-392-7200 Date 7/18/2003

NOTE: If appropriate, attach additional pages and backup.

PRELIMINARY CONSTRUCTION COST SUMMARY

PROJECT DESCRIPTION:

Limits Montague Expressway between Great Mall Parkway & I-680, City of Milpitas, Santa Clara County

Proposed Improvement (Scope) Construct 2 elevated direct HOV freeway connectors between Great Mall Parkway and I680 along Montague Expressway.

Alternate F3d

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$23,703,680
TOTAL STRUCTURE ITEMS	$25,935,000
SUBTOTAL CONSTRUCTION COSTS	$49,638,680
TOTAL RIGHT OF WAY ITEMS (Current Value)	$16,500,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$66,138,680

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date _____
(Signature)

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	40000	M3	$25	$1,000,000	
Imported Borrow	18000	M3	$20	$360,000	
Clearing & Grubbing	1	LS	$1,000,000	$1,000,000	
Develop Water Supply	1	LS	$0	$0	
Demolition (Buildings)	1	LS	$500,000	$500,000	
			Subtotal Earthwork		$2,860,000

Section 2 Pavement Structural Section*					
PCC Pavement (___Depth)					
PCC Pavement (___Depth)					
Pavement (Asphalt Concrete Roadway)	40000	M2	$150	$6,000,000	
Asphalt Concrete					
Lean Concrete Base					
Cement-Treated Base					
Aggregate Base					
Treated Permeable Base					
Aggregate Subbase					
Pavement Reinforcing Fabric					
Edge Drains					
Remove Pavement		M2	$40	$0	
	Subtotal Pavement Structural Section				$6,000,000

Section 3 Drainage					
Large Drainage Facilities	1	LS	$300,000	$300,000	
Storm Drains	1	LS	$0	$0	
Pumping Plants					
Project Drainage					
(X-Drains, overside, etc.)	1	LS	$0	$0	
			Subtotal Drainage		$300,000

*Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 4 Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	2000	M2	$750	$1,500,000	
Noise Barriers (H=4.3m)	0	M	$1,800	$0	
Barriers and Guardrails	2000	M	$180	$360,000	
Equipment/Animal Passes					
Highway Planting					
Replacement Planting					
Irrigation Modification					
Relocate Private Irrigation Facilities					
Erosion Control	1	LS	$250,000	$250,000	
Slope Protection		LS	$0	$0	
Water Pollution Control		LS	$0	$0	
Hazardous Waste Work		LS	$0	$0	
Environmental Mitigation	1	LS	$250,000	$250,000	
Resident Engineer Office Space					
Curb & Gutter	1300	M	$60	$78,000	
Median Curb	4000	M2	$100	$400,000	
Side Walk	5200	M2	$100	$520,000	
Landscaping/Irrigation		LS	$0	$0	
SWPPP		LS	$0	$0	
Sound Wall					
		Subtotal Specialty Items			$3,358,000

Section 5 Traffic Items					
Lighting	1	LS	$200,000	$200,000	
Traffic Delineation Items	1	LS	$150,000	$150,000	
Traffic Signals	1	LS	$0	$0	
Overhead Sign Structures					
Roadside Signs	1	LS	$0	$0	
Traffic Control Systems	1	LS	$200,000	$200,000	
Transportation Management Plan	1	LS	$200,000	$200,000	
Temporary K-Rail					
TemporaryDetour Road					
Signal Modification	1	LS	$200,000	$200,000	
			Subtotal Traffic Items		$950,000
		TOTAL SECTIONS 1 thru 5			$13,468,000

NOTE: Extra lines are provided for items not listed, use additional lines as appropriate.

Section 6 Minor Items		Item Cost	Section Cost
	$13,468,000 x 10% = (Subtotal Sections 1 thru 5)	$1,346,800	
	TOTAL MINOR ITEMS		$1,346,800

Section 7 Roadway Mobilization			
	$14,814,800 x 10% = (Subtotal Sections 1 thru 6)	$1,481,480	
	TOTAL ROADWAY MOBILIZATION		$1,481,480

Section 8 Roadway Additions

Supplemental Work			
	$14,814,800 x 10% = (Subtotal Sections 1 thru 6)	$1,481,480	
Contingencies			
	$14,814,800 x 40% = (Subtotal Sections 1 thru 6) (**%)	$5,925,920	
	TOTAL ROADWAY ADDITIONS		$7,407,400
	TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)		$23,703,680

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 9/26/2003

Estimate Checked By _____ (Print Name) Phone # _____ Date _____

** Use 25% at the PSR Stage or a higher or lower rate if justified.
** Use appropriate percentage per Chapter 20.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	EB HOV Bridge	WB HOV Bridge	BART OC
Structure Type	CIP Concrete Bridge	CIP Concrete Bridge	CIP Concrete Bridge
Width (out to out) - (m)	7.2	7.2	50
Span Lengths - (m)	1000	950	65
Total Area - (m2)	7200	6840	3250
Footing Type (pile/spread)			
Cost Per m2 (incl. 10% mobilization and 20% contingency)	$1,500	$1,500	$1,500
Total Cost for Structure	$10,800,000	$10,260,000	$4,875,000

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures) $25,935,000

Railroad Related Costs:	LS	$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items) $25,935,000

COMMENTS:

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 9/26/2003

NOTE: If appropriate, attach additional pages and backup.

III. RIGHT OF WAY ITEMS	CURRENT VALUE	ESCALATED VALUE (@ 5% Per Year)
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$16,000,000	
B. Utility Relocation (State share)	$500,000	
C. Relocation Assistance	$0	
D. Clearance/Demolition	$0	
E. Title and Escrow Fees	$0	

TOTAL RIGHT OF WAY ITEMS (Current Value) $16,500,000

Anticipated Date of Right of Way Certification (Date to which Values are Escalated) _____

F. Construction Contract Work

Brief Description of Work:

_____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. **Do not** include in Right of Way Items.

COMMENTS:

Estimate Prepared By Charmaine Zamora (Print Name) Phone # (408) 392-7200 Date 9/26/2003

NOTE: If appropriate, attach additional pages and backup.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: C3 (Partial) Mohave Dr. to I-680 & Interchange
Date: May 2004

Item	Description	Cost	%
1	Earthwork	$ 227,500	
2	Pavement	$ 1,500,000	
3	Landscaping	$ 50,000	
4	Structures:		
	a. Curb & Gutter	$ 50,000	
	b. Median Curb	$ 24,500	
	c. Side Walk	$ 204,000	
	d.		
	e.		
	f.		
5	Soundwalls	$ -	
6	Miscellaneous:		
	a. Ramp Metering System	$ 50,000	
	b. ITS	$ 50,000	
	c. Traffic Signals	$ 200,000	
	d.		
7	**Subtotal 1:**	**$ 2,356,000**	
8	Advance Work (Based on DETAIL A - see page 2)	$ 341,620	
9	Drainage (0% to 20% of Subtotal 1)*	$ 58,900	3%
10	Signing (0% to 5% of Subtotal 1)*	$ 47,120	2%
11	Maintenance of Utilities (0% to 25% of Subtotal 1)*	$ 141,360	6%
12	Roadway Lighting & Electrical (0% to 15% of Subtotal 1)*	$ 28,272	1%
13	Environmental Mitigation (0% to 10% of Subtotal 1)*	$ 23,560	1%
14	**Subtotal 2:**	**$ 640,832**	
15	**Subtotal 3 (Subtotals 1 + 2):**	**$ 2,996,832**	
16	Mobilization (as % of Subtotal 3; 10% is default)	$ 299,683	10%
17	**Subtotal 4 (Subtotal 3 + Mobilization)**	**$ 3,296,515**	
18	Construction Contingency (35% of Subtotal 4)	$ 1,153,780	
19	**Construction Subtotal:**	**$ 4,450,296**	**[1]**
20	Planning/Environmental Doc. (10% of [1])	$ 445,030	
21	Design Engineering & Management (15% of [1])	$ 667,544	
22	Construction Engineering & Management (10% of [1])	$ 445,030	
23	**Subtotal 5:**	**$ 1,557,603**	
24	Plan./Eng. Contingency (35% of Subtotal 5)	$ 545,161	
25	**Planning/Engineering Subtotal:**	**$ 2,102,765**	
26	Land, Easements and Right of Way Subtotal	$ 140,000	
27	Land, Easements and ROW Contingency (35% of Subtotal 4)	$ 49,000	
28	**Planning/Engineering/ROW Subtotal:**	**$ 2,291,765**	**[2]**
29	**Total ([1] + [2]):**	**$ 6,742,060**	
30	**or Estimated as:**	**$ 6,700,000**	

* Suggested ranges; use % closest to calculated estimate.

VTA Highway Planning Studies
Cost Estimate Summary

Improvement: C3 (Partial) Mohave Dr. to I-680 & Interchange
Date: May 2004

DETAIL A

Item	Description		Cost	%
8	Advance Work	$	341,620	
8a	Temporary Work (0% to 5% of Subtotal 1)*	$	-	0%
8b	Traffic Control/Detours (0% to 10% of Subtotal 1)*	$	-	0%
8c	Clearing and Grubbing (0% to 5% of Subtotal 1)*	$	106,020	5%
8d	Demolition (0% to 5% of Subtotal 1)*	$	117,800	5%
8e	Removal of Miscellaneous Items (0% to 5% of Subtotal 1)*	$	117,800	5%

* Suggested ranges; use % closest to calculated estimate.